

---

LUCR RI TIIN IFICE, SERIA I, VOL. X (1)

---

**MEZ HEGYES BETWEEN THE TWO WARS – INTRODUCTION  
TO THE HISTORY OF MEZ HEGYES WITH THE  
TETRAHEDRON-MODEL**

**MEZ HEGYES ÎNTRE CELE DOU R ZBOAIE –  
INTRODUCERE ÎN ISTORIA MEZ HEGYES CU AJURORUL  
MODELULUI TETRAEDRULUI**

**BRIGITTA ZSÓTÉR\***

*The aim of this study is to explore the system of connections among the natural-, social-, economical-, and infrastructural spheres in the historic development of Mez hegyes, from the establishment of the Stud Farm (Ménésintézet) to the Trianon peace treaty, by the means of the tetrahedron-model developed by TÓTH JÓZSEF. The essence of the model is the following: the settlement is determined by four spheres – nature, society, economy and infrastructure- which are in close connections with each other. It can be modelled by a tetrahedron where each sphere (the four sides of the geometric solid) are in a very close and inseparable connection, the interaction can be observed at the edges. If there is a change in any elements (spheres) of the settlements, it affects the other three elements (spheres), as well, so the tetrahedron transforms completely.*

**Key words:** *Tetrahedron-model, infrastructural sphere, social sphere economic sphere, natural sphere*

**INTRODUCTION**

On the occasion of that Mez hegyes was declared town twenty years ago I have set myself the aim of writing a geographical settlement monography. The study below can be regarded as a portion of this bold enterprise.

---

\* University of Szeged, Faculty of Agriculture, Institution of Economy and Regional Development

Mez hegyes, with its particular settlement structure, differs from the neighbouring settlements. It is a practically planned settlement surrounded by granges. The granges are due to the fact that they made arrangements for farming on a large scale even at the time of foundation of the stud farm. The area was divided into lands of 500 Hungarian acres. This way 84 districts were established which made the bases of the later granges. In the beginning the districts were not given names but serial numbers, so each grange is mentioned by its number, for example grange 6, grange 21. The number of granges was increasing as the time went on. In 1894 90 were registered, as KERÉKES (2002) mentions. In 1920 the area of the stud farm was enclosed with a fence of 70 kms long along the so-called „granic” (border). This way the stud farm was protected from thieves, wild or wandering animals. A granic-house with a granic-gate was built in every third or fourth kilometre. This situation remained until 1946, the time of redistribution of land.

Writing this study I had two objects in view: one of them is to reveal the connections among the natural-, social-, economic-, and infrastructural spheres in Mez hegyes between the two world wars, and to set a memory for the future generation.

## **METHODS**

I have chosen the tetrahedron-model of settlements formed by TÓTH, JÓZSEF as the method of my research. The mentioned model was defined by TÓTH as follows „Settlements defined as the culminating points of the social-economical space are determined by four spheres- nature, society, economy and infrastructure- which are in close and intensive connection with each other. This system can be modelled with a tetrahedron which is a geometric solid confined by four coincident equilateral triangles. Actually, the model shows that each sphere are in a very close and inseparable connection, and the interaction can be observed at the edges. Consequently, the settlement – which consists of these spheres and is interpreted from this aspect – is a cooperative system the unity of which cannot be disrupted. If any of these elements (spheres) is taken out, it cannot be defined as a settlement any more. The dynamic feature of the model is stressed by the fact that it observes the settlement in constant transformation, in the

alteration of its population, economy, infrastructure and natural environment. The system is well-balanced in the sense that a change in any spheres of the tetrahedron –the settlement- affects the other elements, too. However, a change in the feature or quality of any sides has to bring the transformation of the tetrahedron – since it is a well-balanced model” (TÓTH 1997:23). In connection with the former ones KIS (2006) emphasizes the importance of harmonising the realisation of the operation and development of the settlements with the concept of the sustainability.

PÉCSI ALBERT studied the tetrahedron-theory in 1909 with the difference that he explained the formation of the Earth’s surface with it. CHOLNOKY interpreted the essence of the theory as follows: „the Earth is approaching to the form of a tetrahedron because of its contraction. This theory originates from the experience that the flexible, globular shells or bladders, if we extract the air from them, deform under the external pressure so that their form becomes similar to a tetrahedron, as the tetrahedron is the simplest regular figure which encloses the smallest volume possible with the same surface” (CHOLNOKY 1903:374). The tetrahedron-theory was criticized by CHOLNOKY, JEN :„I wanted to disprove the similarity between the solid crust of the Earth and the flexible globular shells. The fact that the crust creases does not prove that it can be stretched” (CHOLNOKY 1909:429).

We could see that TÓTH, JÓZSEF created a settlement geographical theory with the same space structural form I have mentioned above. SZABÓ, ATTILA (2007) also used the tetrahedron-model of TÓTH in writing his study „The Educational Infrastructure of Hungary after Trianon”.

## **EXAMINATION AND RESULTS**

„After the world war the agricultural income decreased all over the world, and the situation of the Hungarian agriculture turn to be unfavourable. The Trianon peace treaty annihilated the previous economic environment” (ERDÉSZ 1986:223). During the Hungarian Soviet Republic the stud farm and all of its firms were taken into public possession. This situation lasted from 20 March, 1919 for forty-one days because then the Romanian royal army invaded Mez hegyes. The Romanian troops occupied all the firms of

#### *FACULTATEA DE MANAGEMENT AGRICOL*

---

the stud farm on 3 May, 1919. Hardly a year later, on 29 March, 1920 they withdrew from Mez hegyes. They took all movable machines, animals, sugar from the sugar works with themselves.

During the world war I 40 % of the stock of horses perished. It was Mez hegyes that suffered the heaviest losses because it gave the biggest part of horses in front of the cannons and under the hussars. After the war the stock of breeding stallions and breeding mares were brought back to Mez hegyes and their propagation was started.

TÓTH, ISTVÁN (1986) wrote that the establishment of plant improvement started working in the autumn of 1931. In the 1930s prospered the broomcorn production. That time even green peas were grown, and the cultivation of hops was started, too. It was a type of sustainable situation on Great Hungarian Plain. (GAL 1998).

At the end of the 1930s and in the beginning of 1940s the weather was very favourable and so record yields were experienced. Consequently, the change in the natural sphere affected the economical one, as well. As for the social sphere, we can learn from BECSEI, JÓZSEF (1993) that the number of outer population increased up to 1949. In its absolute number it reached the maximum (6374 persons) that year, but it was the highest in 1930 if we consider its proportion. 75,1% of the population lived in the outer areas that time. The explanation for it is that Ómez hegyes had been declared outer area so the number of both these areas and the population there increased. The redistribution of lands happened in 1945, distribution of lands in the inner areas was started during that period. They started to liquidate the granges and to settle the population to the inner areas consciously. As a result the number of the population in the outskirts decreased but regarding the whole area of the Great Hungarian Plain it still represents a very high value.

In 1930 the age composition of the population in the outer and inner areas diverged from each other significantly. The number of children between 0 and 14 was very high, and 83,1% of this age group lived in the outer areas (BECSEI 1993). That is why the grange schools had significant roles in this period. BALANYI, MIKLÓS wrote that in grange 28 the number of children increased in the 1930s so a new classroom had to be built then. Epidemics were frequent, for example in the school-year 1922/23 the school in grange 39 broke up for two months because of a scarlet-fever. The level of other age groups was the highest in the inner areas. 72,5% of

women lived in the outer areas. However, the proportion of men was higher in the inner areas. According to BECSEI, JÓZSEF mainly men were employed in the industrial sphere who lived in the inner areas. It is evident from this fact that the economical and social spheres are in a very close connection. A change in any of the spheres affects the other three, too.

We can learn from the work of KOVÁCS, JÁNOS (2000) that the Romanian troops, while withdrawing, did not remove the equipments in the Sugar Works of Mez hegyes which is due to the director MALBALSKI MILÁN who had good connections. After Trianon the bigger part of the sugar-beet-bearing lands was annexed to Romania so the Sugar Works of Mez hegyes got in an unfavourable situation.

In 1924 there were big investments in the sugar works. The capacity increased but it was necessary to develop the suitable railway network to transport sugar-beet in the necessary amount. This way the infrastructure improved because of the change in the economic sphere –in this case the investments in the Sugar Works of Mez hegyes. A railway network of about 400 kms was expanded (KOVÁCS 2000). Series of new professions, new lines of professions came into existence due to the motorization and structural transformation of cultivation of plants and livestock farming (BORBÁS 1973). TÓTH, ISTVÁN wrote that there was a workers' strike for a rise in wages in the Sugar Works that time. They asked for a rise of 50% and they got it. However, in the following year seasonal workers were brought in from Upper Hungary ('Felvidék') and only the missing worker number was supplied with employees living in the nearby settlements.

The infrastructure constantly developed in the period between the two world wars. To utilize the waste from the hemp factory the generating station of the estate was built up in 1923. It lit not only the centre of the estate but it drove the electric motors of the threshers and the machines in the four workshops and in the buildings of fodder-preparation, too. The generating plant in Orosháza of the Villamossági Rt and the Tóth-mill provided the electricity for other parts of settlement. Boilers, machines pulled by horses or donkeys were followed by the electricity motor (TÓTH 1986).

In the 1920s Mez hegyes was connected to the road network. The interests of the Horthy-family, the Ipari Rt and of the landowners contributed to it (BORBÁS 1973). When the use of cars started to spread they started to pave the roads. First, the road between Pitvaros and

Mez hegyes got a macadam surface. Then the road along the border was built through Mez kovácsháza, and it was followed by the road to Battonya which was paved with cobble stones. In addition to these roads the summer dirt roads remained in use, too.

### **CONCLUSIONS**

The stud farm not only survived the serious economic situation after the world war I but it flourished, as well. With the increase in economy the infrastructure developed, and there was a change in the natural and social spheres, too. Quoting the words of ERDÉSZ, ÁDÁM: „The stud farm had bases better than the average, and due to its state status it benefitted certain privileges. The total integration within the firm was realised. The efficient work of very high quality in the farm guaranteed the realization of potential possibilities. Between the two world wars the level achieved by the stud farm represents the optimum, the best possible result” (ERDÉSZ 1986:224)

### **BIBLIOGRAPHY**

1. **BALANYI M.** 2004: „...az elbocsátó iskola-padok.” A mez hegyesi majori iskolák története. Városvéd Egyesület, Mez hegyes, Mez hegyesi Füzetek 6.
2. **BALANYI M.** 1999: Mez hegyes képes albuma. Mez hegyesi Város Önkormányzata, Mez hegyes
3. **BECSEI J.** 1993: Mez hegyes településmorfológiai jellemz i. Földrajzi Értesít XLII. Évf. 1993 1-4. füzet, pp. 193-223.
4. **BELUSZKY P.** 1999: *Magyarország településföldrajza: általános rész.* Dialóg Campus, Budapest

5. **BORBÁS L.** 1973: Mező hegyesi közgazdász. Mező hegyesi Állami Gazdaság Szakszervezeti Bizottsága, Mező hegyes.
6. **CHOLNOKY J.** 1909: A tetraéder-elmélet kérdéséhez. Földrajzi Közlemények, 374-376; 427-430. p.
7. **ENYEDI Gy.** 1958: A cukorrépa termesztésünk agrár földrajzi vázlata. Földrajzi Közlemények, 131-158. p.
8. **ERDÉSZ Á** 1986: A mező hegyesi ménesbirtok gazdálkodása a két világháború között. Békés Megyei Levéltár, 18, 223-224. p.
9. **GÁL J.** 1998: Az alföldi régió néhány környezetvédelmi, társadalmi-gazdasági összefüggése, Az Alföld a XXI. század küszöbén, 1998. november 12-13, Békéscsaba Szerk.: Baukó Tamás, MTA RKK Alföldi Tudományos Intézet, Nagyalföld Alapítvány, Békéscsaba, 1999. ISBN 963-85437-4-4, pp: 375-377.
10. **KIS K.** 2006: Vidékfejlesztés és a vidékgazdaság. SZTE MFK Dél-alföldi Regionális Szaktanácsadási Központ, Hódmezővásárhely. 72. p.
11. **KOVÁCS J.** 2000: Volt egyszer egy cukorgyár. Márosvéde Egyesület, Mező hegyes, Mező hegyesi Füzetek 2.
12. **MENDÖL T.** 1963: *Általános településföldrajz.* Akadémiai Kiadó, Budapest.
13. **MOLNÁR F.** 1969: *Cukoriparunk helyzete és néhány területi vonatkozása.* Földrajzi Értesítő, 193-214. p.
14. **SZABÓ A.** 2007: A trianoni Magyarország közoktatási infrastruktúrája. Földrajzi Közlemények, 39-53. p.
15. **SZ. BOZSIK NÓRA** 1978: *Mező hegyes lótenyésztésének története 1785-től 1978-ig.* Mező hegyesi Á. G., Mező hegyes.
16. **SZ. BOZSIK N.** 1985: *Mező hegyes lótenyésztésének története 1785-től 1985-ig.* Mező hegyesi Mező gazdasági Kombinát, Mező hegyes
17. **PÉCSI A.** 1909: A Föld felületének alakulásáról. Természettudományi Közöny, 243-250. p.

- 18. TÓTH I.** 1986: *Mező hegyes kétszáz éve.* Mező gazdasági Kiadó, Budapest, 3 p.
- 19. TÓTH J. - TRÓCSÁNYI A.** 1997: *A magyarság kulturális földrajza.* Pro Pannonia Kiadó, Pécs, 23 p.
- 20. TÓTH J.** (szerk.) 1976: *Békéscsaba földrajza.* Békéscsaba Város Tanácsa, Békéscsaba, 12 p.
- 21. TÓTH J.** 1981: A településhálózat és a környezet kölcsönhatásának néhány elméleti és gyakorlati kérdése. *Földrajzi Értesítő*, 267-290. p.